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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,369

01/23/2006

Taichi Ikedo

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2211

52989

7590

10/15/2009

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EXAMINER

AGHDAM, FRESHTEH N

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

10/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,369	Applicant(s) IKEDO ET AL.	
	Examiner FRESHTEH N. AGHDAM	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 6-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Applicant's arguments with respect to claims 6-7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

Claims 6-7 are rejected under 35 U.S.C. 102(a) as being anticipated by the instant's application's disclosed prior art, and further in view of Miki et al (US 2003/0107440).

As to claim 6, the instant application's disclosed prior art teaches an amplification apparatus that has a nonlinear high-frequency power amplifier that amplifies a first input signal; and a power supply voltage control section that forms a control signal for controlling a power supply voltage of said high-frequency amplifier based on a second input signal; and that amplifies a signal level of said first input signal by means of said high-frequency power amplifier to a level in accordance with said second input signal, wherein said power supply voltage control section comprises (fig. 1): an adder that adds together said second input signal and a negative feedback signal (fig. 6, means 131); an integrator that integrates output of said adder (means 133); a quantizer that quantizes output of said integrator in accordance with a predetermined threshold value (means 134); a low pass filter that eliminates quantization noise from output of said quantizer

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(means 135); and a compensator that has an inverse characteristic of said low pass filter or a characteristic approximating thereto and performs compensation of a feedback amount of said negative feedback signal (means 138). The instant application's disclosed prior art does not expressly teach an input selection that selectively inputs either said second input signal or a fixed voltage, wherein operation of said power supply voltage control section is switched between operation as a class D amplifier and operation as a DC-DC converter in accordance with input switching of said input selection section. One of ordinary skill in the art would recognize that it is well known in the art and/or obvious for operation of the power supply voltage control section to switch between operation as an ordinary class D amplifier and operation as a DC-DC converter in accordance with the type of modulation that is being used (or whether it is a GSM system or not), wherein for a modulation method or a system in which there is no amplitude modulation component (e.g. GSM system) then the power supply voltage control is switched to operation as a DC-DC converter in order to provide a power supply circuit for a high frequency power amplifier, which is capable of being used in a cellular phone capable of communicating according to a plurality of systems like a GSM system and a CDMA system as it is evidenced by Miki (par. 7 and 11). Therefore, it would have been obvious to one of ordinary skill in the art to switch between the two operations for the reason stated above.

As to claim 7, one of ordinary skill in the art would further recognize that it is well known in the art and/or obvious when the operation of the power supply voltage control

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section is switched to operation as a DC-DC converter then the high frequency power amplifier switched from a switching mode to a linear mode.

Allowable Subject Matter

Claim 4 is allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRESHTEH N. AGHDAM whose telephone number is (571)272-6037. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. N. A./

Examiner, Art Unit 2611

/CHIEH M FAN/

Supervisory Patent Examiner, Art Unit 2611